

PLANNING FOR A RESEARCH FUTURE

A COMMENTARY

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Abstract: This paper outlines the urgent need for implementing a strategy for clinical chiropractic research to improve patient care and perhaps support the active promotion of chiropractic in the community. It addresses the cost of scientific research, and the need to develop a scientific chiropractic community which can address the diverse needs of the chiropractic profession and maintain parity with professions in similar fields.

Index Terms: Chiropractic, research-planning.

The need for research.

Several papers have outlined attitudes which hinder the development of a research climate (1,2). But, over the past few decades a number of authors have called for more chiropractic research (3-6). If these calls continue, as it seems likely, does this mean that there is still insufficient research? The answer must be yes if there are unanswered questions. On the other hand, if we have no questions, why carry out research? Or if people get well without the answers, why embark upon research? Or if someone else will prove it in the future, why should we be involved in research ourselves?

The purpose of research.

Sometimes the purpose of research is presented to be to get "recognition" for chiropractic (7). This suggests that science is the handmaiden of politics - and will be biased that way. Indeed it might be, especially in this time of economic rationalism, where even academia is expected to turn a profit. Who will buy the results of chiropractic research? Perhaps practitioners?

What value could research have to a practitioner? Surely, the primary goal of chiropractic research should be the improvement of chiropractic to facilitate the improvement of our patients health and well-being. But, how would we know that chiropractic itself was improving? I suggest:

1. By establishing what we think we know now.
2. By establishing what could be improved upon.
3. By planning to make the change.
4. By making the change happen.
5. By evaluating the new state of affairs compared to the old situation.
6. By repeating steps 1-5.

These steps would answer the questions: Is chiropractic better today than it was 30 years ago? Will chiropractic be better in 30 years than it is today? Will patients of chiropractors be better off in 30 years than today? And how will we know?

No doubt each of us has some sort of answer to these questions. The future of chiropractic depends on chiropractors' views of themselves. As individuals, there are at least three methods of dealing with this challenge:

- a) Political involvement at association level.
- b) Involvement in public education programmes.
- c) Involvement in research programmes.

The first option helps make your wishes for the future happen. Whether you have been involved with the association or not, this has been the key to our success in the past and today (in addition to our therapeutic success).

The second option of public education programmes is currently in vogue throughout Australia as it seems to provide tangible results. Without research, public education is the application of advertising, practice management and personal development tricks. Without research it is limited to perpetuating dogma and propaganda (8). Feedback from some chiropractors who have attended media briefings attest to the difficulties in presenting chiropractic explanations which are likely to be accepted by the media and journalists.

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It is hypocritical to accuse the media of being a biased tool of medicine if we provide them with our own propaganda or poor quality scientific papers.

Option three relates to research and should assist the first two options. To work it needs to:

- a) be carried out.
- b) demonstrate its relative objectivity. That is it needs to show that it is not subject to bias.
- c) be carried out by suitably trained and independent researchers.

If you are not convinced about the value of research into chiropractic two recent examples can be cited. 1) The publication of the Meade study (9) resulted in an immediate increase in patient numbers as reported by 82% of respondents in Great Britain together with an increase of medical referrals by 62% (10). 2) The Victorian WorkCare study (11) resulted in a number of media reports.

Who should research chiropractic?

The next question to be posed is whether independent research on chiropractic should be carried out by non-chiropractors? No doubt there will always be research which is non-chiropractic and still relevant to our needs. But it is possible for there to be researchers who are chiropractors? Most chiropractic institutions select students because of their orientation to humanistic values. From speaking with first year chiropractic students over a number of years I have observed that students with previous scientific qualifications often enter chiropractic because they wish to turn away from science. However, some chiropractors have, and are using their prior skills to the benefit of chiropractic.

Keating and Calderon (12) have called for chiropractors to be trained as scientist-practitioners. While this is an ideal, it does not take into account the conflicting objectives of science and practice. Science attempts to answer questions, minimising the source of error, but the main practice objective is to 'get a result'. It is difficult to achieve a culture change to acknowledge "the chiropractor as an evaluator of the conservative healthcare he/she provides" (12) - especially when such attitudes are not rated highly in the educational institutions or amongst the professions leaders (13).

Chiropractic education is broad and it is difficult to add yet another major objective to the program without extending the program further. Some would argue that critical research thinking is essential to professional chiropractic practice. While this is true theoretically, it ignores the (significant) number of times that critical thinking is suspended in practice in order to achieve a

"result". In these cases chiropractic is being applied "experimentally". As such the results should be reported to assist others in delivering good care, or preventing others from applying treatments which don't work.

Two examples of *experimental* chiropractic are suggested:

1. A patient who, after failing to respond to traditional/standard chiropractic procedures, responds to a less well accepted procedure. If the patient, and the interventions can be well described then the author could speculate on why one treatment succeeded and the other failed. A clinical researcher could collate similar reports and devise a controlled study to see if the results still held true.
2. A patient reports that their episodes of epileptic attacks seem to have reduced since beginning chiropractic care for an apparently unrelated spinal problem. In this one case it is difficult to document attacks retrospectively. Once one interesting case is sighted, a practitioner should be on the lookout for a second. If prepared, he/she could attempt to collect information about the epilepsy prior to beginning treatment (establish a baseline phase, so long as any clinical imperative is not ignored). Treatment could begin, and the patient continue to complete a diary of attacks.

I have used epilepsy as a hypothetical example, but there are other examples which possibly slip by because we are not adequately prepared. Chiropractic has operated in the experimental mode for so long, that this 'experimenting' mode of practice has become the norm. We are now unsure what responses are worthy of publication! Some chiropractic procedures are so complex and are built upon so many assumptions, that when one begins to question the whole edifice crumbles down. Perhaps for many it is easier to suspend judgement and be "holistic", anything goes, or if it works use it!

If we propose critical thinking in all things taught in chiropractic, then staff who teach chiropractic techniques will be faced with significantly reduced classes - perhaps only presenting some basic concepts which are really aspects of applied anatomy! While critical thinking is a goal, it should be presented along with the idea that there are degrees of criticism and degrees of strength in evidence. Criticism needs to be tempered with pragmatic confidence in what works, along with a commitment to address the criticism in time.

As most chiropractors know, practice can easily dominate one's life and any thought of research soon becomes miles away. Still, there are a few practitioners who publish, and a number who are involved in further training to extend or broaden their skills.

Funding chiropractic research.

Another option, is to have a formal program to assist in the development of chiropractic research. This is what the Australian Spinal Research Foundation was established to do. A number of chiropractors donate to this organisation, but it seems not enough - why?

A straw survey at a recent seminar showed that of those who donate - the average amount donated is \$1,000.00 pa. This foundation has funded a number of small research projects, and at least one large one. Here, the question which can be posed is: Is the level of research supported sufficient for the needs of chiropractors? The only way to answer this question is to determine our needs and to determine the costs of research. Our needs are determined by the diagnostic (analytical) and therapeutic (intervention) territory claimed by the "scope of chiropractors' practice". There is a price to be paid for insisting that chiropractic should not be defined in any Act of Parliament or in any dictionary. One price we pay is that we have to argue amongst ourselves to determine what we do and what think we do. Another price we pay is that we have to rely on a number of non-chiropractic sources to defend our use of numerous modalities - even the adjustment/manipulation.

The real costs of research are unknown but can be estimated by reference to other disciplines of a similar nature. By comparing ourselves to orthopaedics in the USA in 1987 (14), chiropractic in Australia should expect to undertake \$7.5 million of funded projects just to maintain parity (15). Three quarters of the 2,960 orthopaedic research publications were unfunded and carried out in the researchers own time (14). On average each project involved 4 months of effort, and those funded were supported to the level of \$50,000 per project (14). Proportionately, by comparison, 460 papers should be published by the Australian chiropractic community each year. Over the 1984-6 period Keating and Young (3) identified a small world-wide chiropractic community of 57 regular contributors to two premier chiropractic journals which represents about 0.14% of the profession. If, as Keating and Young suggest, the normal expectation of academics that 2 scientific papers per year is reasonable, and given the world-wide number of chiropractors is 40,000 (compared to 13,000 US orthopaedists) then the

chiropractic scientific community should be increased by a factor of 90!! (9000 publications/(50 researchers x 2 papers/year)).

Academic contributions.

Where are the publications of chiropractic staff at the two chiropractic institutions you might well ask? Staff from both institutions have published research work. The approximately 20 equivalent full-time staff at RMIT, contributed to chiropractic science during 1992: 21 journal articles, book chapters or conference proceedings; 24 conference papers, invited papers or grand rounds presentations; and 11 workshops or seminars (16).

At Phillip, until the merger with RMIT in 1992, funding was provided exclusively for teaching. Staff workload reflected this, and without any increase in funding (in fact a decrease) the goals of the current University includes research and teaching. Research publications from chiropractic staff are unlikely to grow in number in the near future until funding and curriculum issues are resolved.

At the November 1992 COMSIG conference, Professor Nikolai Bogduk estimated that 4/100 graduates should be expected to pursue a higher degree in order to provide expertise to advance a discipline in a scientific direction (17). In 1992 there were 8 students enrolled in postgraduate studies at RMIT, up to 30 at Macquarie University and an unknown number pursuing other qualifications. A manpower study should address the need for postgraduate qualifications along with the need for chiropractors in the community.

It is cold comfort that a survey of American physiatrists' views on research reveals a similar concern about a lack of research in physical medicine and rehabilitation (18). In this study, it is reported that less physiatrists are pursuing research, while the number entering private practice has tripled over the period 1968-1982. Funding for research is said to have halved in physiatrists rarely spend more than 25% of their time on research, while 46% of hospital-based medical specialists spend more than 25% of their time on research.

Medical schools in the US are reported to spend as much as 50% of their operating budgets on research, and while chiropractic colleges are not generously funded, an allocation of 5-10% has been recommended (13).

Conclusion.

A number of issues have been presented which impact upon the development of chiropractic research. In summary the development of chiropractic science needs:

1. Unequivocal support for chiropractic research.
2. Development of (independent) chiropractic scientists and/or spine scientists - as sub-disciplines of chiropractic.
3. Chiropractic scientists to address questions which are meaningful to chiropractic practitioners.
4. Participation of practitioners in the development of chiropractic science including the reporting of results of experimentally-applied chiropractic care.
5. Adoption by chiropractors of scientific chiropractic methods in preference to unsearched chiropractic methods, where a choice exists.

In conclusion, research is an expensive enterprise which should be responsive to the professions needs and provide evidence that chiropractic procedures are being refined. A practitioner endorsed plan of action to improve research is required.

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